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From: "Leitch, Robert A NAE" <Robert.A.Leitch@usace.army.mil>

To: "Mitkevicius, K C NAE" <K.C.Mitkevicius@usace.army.mil>; Dave Dickerson/R1/USEPA/US@EPA

Copy To: "Fredette, Thomas J NAE" <Thomas.J.Fredette@usace.army.mil>; "Kammerer-cody, Denise E NAE" <Denise.E.Kammerer-Cody@usace.army.mil>

Delivered Date: 03/11/2008 09:02 AM EDT

Subject: RE: CAD Cell Cover Material

FYI - Steve England from the USACE Philadelphia office will be joining the call to hear about the project and to provide GW modeling insight.

-----Original Message-----
From: Mitkevicius, K C NAE
Sent: Tuesday, March 11, 2008 8:43 AM
To: 'dickerson.dave@epamail.epa.gov'
Cc: Leitch, Robert A NAE; Fredette, Thomas J NAE; Kammerer-cody, Denise E NAE
Subject: FW: CAD Cell Cover Material

Just a reminder that we have a followup 2 pm conference call on line 978-318-8020 on the CAD Cell modeling issues.

-----Original Message-----
From: Fredette, Thomas J NAE
Sent: Monday, March 10, 2008 2:32 PM
To: Leitch, Robert A NAE
Cc: Mitkevicius, K C NAE; Kammerer-cody, Denise E NAE
Subject: RE: CAD Cell Cover Material

Off the top of my head my recommendation would be a silty/clay cap with total organic carbon in the 0.5-1.0% range, placed hydraulically. Depending on how fancy you want to get we could also consider various cap amendments (activated carbon and the like), but I have yet to see any data that shows they are any more effective than natural silt/clay sediments (in existing research they are usually only compared to sand caps, which to me is a bit out of touch with reality).

Hydraulic placement would help to minimize disturbance to the contaminated sediments (which I understand are to be placed mechanically). This may require cap placement in a few lifts to allow settlement between each lift. In most cap applications I wouldn't necessarily recommend hydraulic placement, but in the case of a Superfund project and in this particular scenario I think it is reasonable. We also might consider somewhat sandier material as part of the near-surface cap.

From those general thoughts we would need to build specifications. There would be other details to think about including time (weeks to a few months) to allow the contaminated sediments to settle prior to cap placement (no matter how hard you try, there will be a high-liquid-content layer in the CAD that accumulates on top of the more dense material as disposal progresses) and the possibility of some thin layer sand placement to possibly hasten the settlement process.

No, I haven't worked with any of the folks in Philly. I did talk with the WES folks today (after playing phone tag for a few days) and they are quite interested in assisting us. More on that tomorrow.

Tom

-----Original Message-----
From: Leitch, Robert A NAE
Sent: Monday, March 10, 2008 1:24 PM
To: Fredette, Thomas J NAE
Cc: Mitkevicius, K C NAE; Kammerer-cody, Denise E NAE; Leitch, Robert A NAE
Subject: CAD Cell Cover Material

Hello Tom!

Last week Dave Dickerson at EPA asked us about the best cap material to use on the proposed 40' deep CAD cell in the NBH. The proposed cap will be 3' thick. Do you have any insight into the best cap design? And do you have specifications for it?

2nd question - Have you ever worked with the folks in the Philadelphia District on CAD cells?

Tx

Bob